

ABSTRACT OF THE DISCLOSURE

A vehicle radar system extracts peak frequencies f_{bu} and f_{bd} of
respective beat signals B1 to B9 representing the frequency difference
5 between a transmission signal f_s and a plurality of received signals f_{r1} to f_{r9} .
The phase difference of respective beat signals B1 to B9 at the peak
frequencies f_{bu} and f_{bd} is converted into a frequency signal. In the case of
reflection from a close range road surface or raindrops, the phase difference
of each beat signal is irregular. The peak frequency intensity of a converted
10 frequency signal is small. This system compares the peak frequency
intensity of the converted frequency signal with predetermined criterion
intensity. Then, the system identifies an objective with a close range road
surface or raindrops when the peak frequency intensity of the converted
frequency signal is not larger than the predetermined criterion intensity.

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